

Report to the Iowa Legislature
on the Status of the
Iowa Statewide Interoperable Communications System Board (ISICSB)
Calendar Year 2010

Overview

During the first session of the 82nd General Assembly, the Iowa Legislature established a new Iowa Statewide Interoperability Communications System Board (ISICSB) (HF353).

2007 Iowa Acts, House File 353, created Iowa Code Section 80.28, which addresses the membership of the Board, with Section 80.29 identifying its duties.

2009 Legislative Report

In lieu of a written report, on January 21, 2010, Chair Todd Misel personally briefed the Iowa House Public Safety Committee on behalf of the ISICSB. The outline of that briefing is contained in Appendix A. Additionally, activities during 2009 are contained in the ISICSB Timeline in Appendix B. In order to brief the entire Legislature, and place some of the 2009 activities in context, related 2009 activities will be briefly reported herein.

2010 Legislative Report

The ISICSB has been in existence for approximately three years. During calendar years 2009 and 2010 there were **six (6) changes** to the Board. Mr. Karlos Kirby from the Des Moines Fire Department resigned his position as a fire representative, and he was replaced by Mr. Tom Berger from the Epworth Volunteer Fire Department, while Sheriff Ted Kamatchus replaced Sheriff Doug Bass, after his resignation. Importantly, during the 2009 Legislative session, four (4) new Board members from our state Legislature were added as ex-officio members. The board felt this was a very good addition by receiving their participation and input during the year, and in helping inform and brief the other members of our legislature.

Current ISICSB Members

Local Representatives

<u>Name</u>	<u>Position</u>	<u>City</u>
Ron Miller	At-Large Member	Fairbank
Sandy Morris	Communication Center Manager	Des Moines
Wendi Hess	Communication Center Manager	Woodbury County
Jeremy Logan	Municipal Police Department	Oelwein
Roxanne Warnell	Municipal Police Department	Resigned November, 2010 – (Vacant-awaiting appointment)
Mark Freese	Fire Department	Davenport
Tom Berger	Fire Department	Epworth Volunteer Fire (Replaced Karlos Kirby)

Ted Kamatchus

Dina McKenna

County Sheriff

County Sheriff

**Marshall County
(Replaced Doug Bass)
Story County**

State Agency Representatives

John Benson	Division of Homeland Security and Emergency Management
Tom Boeckmann	Department of Public Health
Mike Dreke	Department of Corrections
Todd Misel	Department of Public Safety
Jason Sandholt	Department of Natural Resources
Robert Younie	Department of Transportation

Legislative Ex-Officio Members

Senator Tom Hancock, appointed by Majority Leader of the Senate
Senator Shawn Hammerlinck, appointed by Minority Leader of the Senate
Representative Kerry Burt, appointed by Speaker of the House of Representatives
(this position will be vacated since Rep. Burt did not run for re-election in 2010)
Representative David Tjepkes, appointed by Minority Leader of the House of Representatives

Communications Interoperability Efforts

During 2009 and 2010, the ISICSB worked on multiple significant issues, including:

- Completion and approval of a statewide master interoperability plan in November, 2009, utilizing a 700 MHz statewide backbone network allowing five levels of communications interoperability. (See Appendix D for Executive Summary of this plan. The full plan is contained on the ISICSB web site at www.isicsb.iowa.gov).
- Upon notice by the FCC that it would, for the first time, consider applications for licensing of the use by public safety of the 700 MHz wireless broadband spectrum, the ISICSB applied for an FCC Waiver (license) in October, 2009 to utilize that wireless public safety-only broadband spectrum as an adjacent component to the statewide 700 MHz voice or LMR (Land Mobile Radio) spectrum component, as part of the master plan.
- Hiring of Jim Bogner as the ISICSB's first full-time statewide interoperability coordinator (SWIC) in March, 2010.
- As required by the Department of Homeland Security (DHS), Office of Emergency Communications (OEC), the ISICSB prepared an initial Statewide Communications Interoperability Plan (SCIP) for Iowa, and has updated it annually (www.isicsb.iowa.gov).
- In May, 2010, the ISICSB was one of twenty-one governmental bodies in the United States to be issued the FCC Waiver for use of the 700 MHz broadband spectrum as part of a nation-wide wireless broadband network build-out of a national public safety communications interoperability plan. In a related ruling, only these twenty-one waiver recipients were allowed to apply for a re-

opening of a federal BTOP (Broadband Technology Opportunities Program) grant in July, 2010 to initiate build-out of these wireless networks. The ISICSB applied for a \$153 million BTOP grant, which was unsuccessful because of an insufficient matching and recurring state funding business plan. It should be noted that this grant opportunity was only available to Iowa subsequent to the FCC Waiver being issued, and only for a thirty-day period which, although it was strongly supported by the Governor, occurred after the legislative session concluded for the year.

- The ISICSB continues to explore ways to build-out such a high-speed broadband network, in conjunction with the statewide master plan of LMR or voice network. As such, in 2011 the ISICSB intends to issue an RFI to explore its build-out options, to include public-private options.
- The ISICSB has been leading the way in promoting the visibility of the FCC unfunded narrowbanding mandate issue with its deadline of 12/31/2012, and educating Iowa's public safety agencies as to what they must do to comply with this mandate.

Activities

In order to demonstrate the Board's activities, a continuous timeline chart is prepared and maintained. That timeline, which is included in Appendix B, is regularly updated on the ISICSB website: www.isicsb.iowa.gov.

Appendix A

Brief to the Iowa House Public Safety Committee on Jan 21, 2010 on behalf of the Iowa Statewide Interoperable Communications System Board (ISICSB)

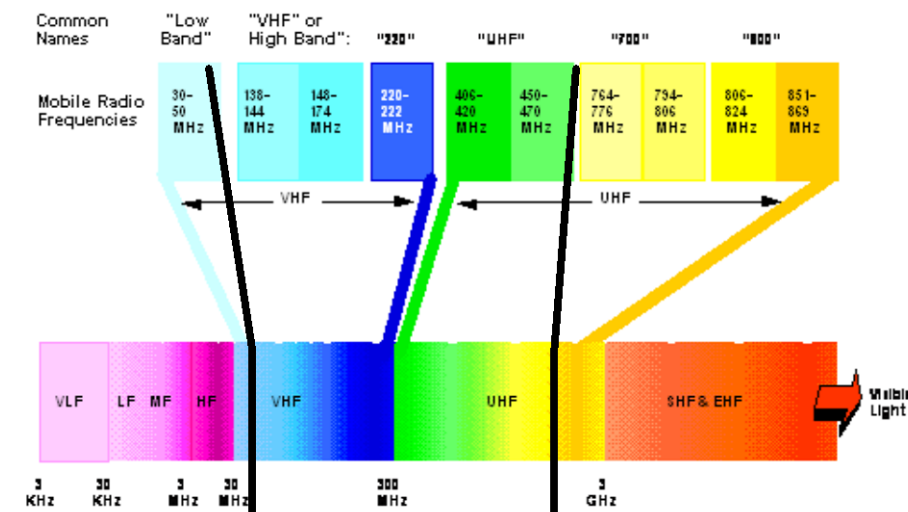
- Website for the Board. www.isicsb.iowa.gov
- Office of Emergency Communications (OEC) conducted training for the Board on the topics of governance and our statewide communications interoperability plan (SCIP)
- Conclusion / Recommendation from Federal Engineering's (FE) 15 month planning process. (Not a Federal Agency) include:
 - ✓ Participation of 85% of Public Safety Answering Points (PSAPS)
 - ✓ Over 240 survey responses from local law enforcement (Police and Sheriff), fire, emergency management and EMS providers
 - ✓ Phased implementation of a new 700 MHz voice/data system (6 phases)
 - ✓ Reuse existing sites with modifications as necessary
 - ✓ Total sites necessary to achieve 95% county coverage, 265
 - ✓ 265 sites consist of
 - Use 127 of the 175 existing DPS/DOT sites (why not all?)
 - 103 other existing sites could be considered (local L/E, cellular, other private)
 - 35 new sites
 - ✓ Iowa's 6 Homeland Security Regions serve as the footprint for the phases
 - ✓ Microwave and ICN make up the backbone of the system
 - ✓ Board executed a clause in the FE contract and had them do a repack of the 700 MHz frequencies to be in coordination with our Iowa Master Plan
- Selection of a consultant to provide Iowa with a Statewide Interoperability Coordinator (SWIC)
 - Contract awarded to Federal Engineering
 - Selection of individual should be completed by Feb 1, 2010
- Addition of four (4) members of the legislature to the Board

- Reappointment of the current Chair and Vice-Chair
 - Todd A. Misel, Iowa DPS/ISP 515-725-6111 or misel@dps.state.ia.us
 - Dina McKenna, Story County Sheriff's Office 515-382-7469 or dmckenna@storycounty.com

Federal Mandate of Narrow Banding January 1, 2013 (Analog vs. Digital)

What does it mean?

- Most current public safety radio systems use 25kHz-wide channels,
- 85% of Iowa's public safety radio systems are a combination of VHF (75%) and UHF (10%)
- The Federal Communications Commission (FCC) has mandated that all non-federal public safety licenses using spectrum from 72-512 MHz that have 25 kHz radio systems migrate to narrowband 12.5 kHz channels by Jan 1, 2013
- Agencies that do not meet the deadline could face the loss of communications capabilities
- Agencies need to start planning now to migrate to narrow band systems by assessing their current radio equipment and applying for new or modified licenses
- Diagram below represents the spectrum that will be affected by narrow banding
- State shared Frequencies affected LEA, I.O.W.A. Channel & State Mutual AID



Appendix B



Interoperability – The ability of public safety and public services personnel to communicate and to share data on an immediate basis, on demand, when needed and when authorized.

- April 2004 Governor Vilsack organized the Iowa Communications Task Force to address interoperability issues.
Members of the task force included representatives from the public and private sectors, law enforcement, fire, and EMS, administrators, engineers, users and vendors.
- Oct. 2004 The Task Force presented their report to the Governor.
The report included a recommendation for an interoperable communications system for voice, data and video that can be sustained, maintained and improved as needs change and technology allows.
Three essential elements identified by the Task Force report were:
- Governance
 - Standards/Technology
 - Funding
- The report also recommended that LEATAC take on the governance piece until it could be transitioned to a permanent authority.
- Oct. 2005 LEATAC approved the governance board structure for a statewide interoperable communications system board to include:
- 1 Representative from the Department of Public Safety
 - 1 Representative from the Department of Transportation
 - 1 Representative from Iowa Homeland Security Emergency Management
 - 1 Representative from the Department of Corrections
 - 1 Representative from the Department of Natural Resources
 - 1 Representative from the Department of Health
 - Two Representatives from Local Law Enforcement
 - Two Representatives from Fire/EMS
 - Two Representatives from Emergency Communications

- Two representatives from Iowa Sheriffs
 - One At-Large Member
- Dec. 2006 CTA Communications (Lynchburg VA) was hired to:
- Assess the existing statewide emergency communications infrastructure (voice, data, video and 9-1-1).
 - Present a conceptual system design for a statewide solution using a standards-based solution which provides integrated voice and data and offers video.
 - Develop a migration path for a statewide interoperable communications system solution.
 - Funding was provided from a Federal Homeland Security Grant
- April 2007 House File 353 was signed by the Governor and is now in Iowa Code Chapter 80, sections 28 & 29
 HF 353 established a statewide interoperable communications system board under the joint purview of the Department of Public Safety and the Department of Transportation.
 This bill specifies that the board shall develop, implement and oversee policy, operations and fiscal components of communications interoperability efforts at the state and local level - coordinate with similar efforts at the federal level and ultimately develop and oversee the operation of a statewide integrated public safety communications interoperability system.
- Sept. 2007 CTA Communications Report was finalized and presented.
 CTA assessed the current state of emergency communications in Iowa using a detailed survey instrument that was sent to over 200 users throughout the State. Responses were received from 12 cities, 72 counties and eight state agencies. The results of those surveys, in conjunction with a series of meetings held throughout the state, determined that Iowa's existing emergency communications radio infrastructure is comprised of outdated technology. Much of the VHF equipment, if not upgraded, risks becoming unusable after 2013 due to FCC narrow banding requirements. There are numerous disparate systems implemented across the state and, while various technologies are used to attempt to provide interoperability, the result is inconsistent and often non-interoperable systems are working side-by-side.
 The State of Iowa needs to replace – not upgrade – the State Patrol and DOT radio system infrastructure in order to achieve the goals identified for a statewide interoperable radio system.
 Key recommendations in the CTA study include:
- Utilize the new 700 MHz band, which will provide the quantity of structured channels needed for a statewide interoperable radio system.
 - Implement a standards-based P25 trunked system for interoperability, expandability, options and competitive procurement.
 - Implement a phased approach for the system roll-out, consistent with funding and desired prioritization of regional areas.

- Invite localities to join the statewide network concurrent with the phased build-out for state agencies. Localities can bring shared resources to the network and will have the benefits of voice and data plus true interoperability with other users.
- Use gateway technologies to insure that agencies using VHF, UHF and non P25 800 MHz will be able to interoperate within the system via selected channels or talk groups.
- Encourage the use of multi-protocol P25 700/800 MHz radios by localities or agencies that continue to use their existing 800 MHz trunked radio networks to allow them to achieve direct radio-to-radio interoperability with other users within the system.

Oct. 2007	<p>First meeting of the Iowa State Interoperable Communications System Board (ISICSB).</p> <p>Elected a Chair (Todd Misel) and Vice Chair (Dina McKenna).</p>
Nov. 2007	<p>Information on the PSIC Grant was presented to the Board.</p> <p>Iowa will receive approximately 10.9 million dollars. Approximately \$847,000 of that is to be set aside as a Strategic Technology Reserve (STR). Of the remaining approximately 10 million dollars, 80% is to be passed through to local projects. In order to receive the PSIC grant funds – we must have a statewide interoperable communications plan and related investment justifications.</p> <p>The PSIC money that goes to local agencies is supposed to be for projects that fill identified gaps in interoperability. Without a plan, it's difficult to identify gaps... The Board voted to use the State's 20% on a consultant to develop a comprehensive statewide interoperable communications implementation plan based on the findings of the CTA Study.</p> <p>All projects (except planning, training and coordination) require a 20% match. The Board voted to form a committee to develop an RFP for a consultant to develop the detailed statewide interoperability plan. The committee used the results of the CTA Communications study as their guideline.</p> <p>Committee members were:</p> <p>Dina McKenna Todd Misel Bob Younie Les Fish Terry Martinsen Eric Nevins Randy Goddard</p>
Dec. 2008	<p>The Board submitted the Iowa Statewide Communication Interoperability Plan (SCIP) and the initial investment justifications to the U.S. Department of Homeland Security for review and approval. (The SCIP is basically Iowa's plan to plan. It will be used for grant funding and establishes some criteria which will be used in the final plan.)</p>
Feb. 2008	<p>The Board discussed the need to have a contact – one contact – in each county that could serve as a liaison between the Board and local entities. It was</p>

suggested that emergency managers would be a good option and, after discussion, it was decided that the homeland security regions would be a good place to begin funneling information down to the local level.

March 2008 Board members received training from the representatives of the Interoperable Communications Technical Assistance Program.

April 2008 The Iowa Statewide Communication Interoperability Plan (SCIP) was approved by the U.S. Department of Homeland Security.

May 2008 The RFP for a consultant to develop the interoperable communications plan was released.

Representatives of the Minnesota system made a presentation to the Board. Their website is <http://www.srb.state.mn.us/> June 2008 The Interoperable Communications Grant program was announced. Iowa will be getting \$330,000 from this grant. The money from that grant cannot be used for equipment. It is in place to:

- Support a governance structure
- Develop training
- For the development of operational protocols

John Benson suggested the grant money be used to fund a Statewide Interoperability Coordinator and one support position.

The grant application was due July 21st.

Also in June –

The responses to the RFP were returned from the following companies:

- SAIC – McLean, Virginia
- RCC Consultants, Inc. – Richmond, Virginia
- Macro Corporation – Chalfont, Pennsylvania
- CTA Communications – Lynchburg Virginia
- Federal Engineering, Inc. – Fairfax, Virginia
- GeoComm – St. Cloud, Minnesota
- L. Robert Kimball & Associates, Inc. – State College, Pennsylvania
- QA Technologies, Inc. – Omaha, Nebraska

July 2008 The RFP responses were reviewed by an evaluation team consisting of:

- Terry Martinsen – Cedar Rapids Fire Department
- Bob Younie – Iowa Department of Transportation
- Todd Misel – Iowa Department of Public Safety
- Eric Nevins – Des Moines Police Department
- Randy Goddard – Iowa Homeland Security Emergency Management
- Les Fish – Iowa Department of Public Safety
- Dina McKenna – Story County Sheriff's Office

Their recommendation, which was approved by the Board, was that the contract be awarded to Federal Engineering, Inc.

Aug. 2008

An e-mail was sent to local entities giving them notification that PSIC grant applications and guidelines were available for PSIC grant money.

A Memorandum of Understanding (MOU) between the Iowa Homeland Security Regions, Iowa Homeland Security and Emergency Management and the State Interoperable Communications System Board (ISICSB) was developed and reviewed by HSEMD, PSIC Grant Administration via the Interoperable Communications Technical Assistance Program. **The purpose of the MOU is to enable the ISICSB to receive the State's portion of the federal PSIC grant funds in advance of the locals receiving their funds. This will allow the Board to begin the development of the Statewide Interoperable Communications Implementation Plan and identify investment justifications for the local projects. It will also give the Board the time they need to evaluate local projects that will be funded by the 80% pass through monies.** Board members begin meeting with the Iowa Homeland Security Regions to update them on the Board activities and to obtain their signatures on the MOU.

PSIC grant applications were received from the following local agencies:

- Cerro Gordo/Franklin
- Dubuque County
- Floyd County
- Hardin County
- Jasper County
- Johnson County
- Linn County
- Plymouth County
- Polk County
- Scott County
- Shelby County
- Story County
- Woodbury County

The local applications are presently being reviewed by members of the Board. They are using the PSIC grant guidelines as the basis for the review. They intend to review each application package and conduct interviews with each application to insure they have all possible information on the projects before determining which projects to present to the PSIC Grant Administrators seeking funding approval.

The Board identified a team to review the PSIC grant applications that were received from local agencies. Team members are:

- Wendy Hess – Woodbury County Communications
- Doug Bass - Carroll County Sheriff
- Mike Dreke – Iowa Department of Corrections
- Mark Frese – Davenport Fire Department

Others may be invited to participate in the review process.

Issues we are currently working on...

- Review of the local PSIC Grant Applications
- Developing Administrative Rules
- Determining the future of LEATAC
- Development of a technical advisory group
- Training for Board members

More information about the Iowa Statewide Interoperable Communications System Board (ISICSB) and their activities can be found on their website:

<http://www.dps.state.ia.us/ISP/Interoperability/index.html>

Sept. 2008

The Board signed a contract with the firm hired to develop the statewide interoperable communications plan (Federal Engineering, Inc.) on the 15th. Representatives from the Board attended the Minnesota Statewide Radio Board meeting on September 25th.

A preliminary meeting was held with representatives from Federal Engineering, Inc. (FE) on September 29th.

Representatives from Federal Engineering made a presentation at the Governor's Homeland Security Conference in Des Moines.

The PSIC Grant Application Review Team, chaired by Wendi Hess met to review the grant applications. Team Chair, Wendi Hess, asked Rich Hester to also participate in the review process. Team members in attendance were:

- Wendi Hess
- Mike Dreke
- John Benson
- Doug Bass
- Rich Hester

They went through each application to make certain it met the criteria and came up with a list of questions they were going to ask each applicant to respond to either in writing or in person.

The following Board members and Chief Communications Engineer Les Fish attended the Upper Midwest Summit Meeting and Vendor Expo in Arden Hills, Minnesota on September 25th:

- Todd Misel
- Dena McKenna
- Mike Dreke
- Ron Miller

ISICSB received \$300,000 from the IECPT grant to be used for a coordinator position and a support staff person.

Oct. 2008 The PSIC Grant Application Review Team made a presentation to the Board that included a brief synopsis of each of the 13 applications and their recommendations.

Grants were awarded to the following counties:

Hardin	\$ 374,057
Jasper	\$1,600,000
Johnson	\$1,927,882
Linn	\$ 480,000
Plymouth	\$ 30,320
Polk	\$ 300,000
Scott	\$2,700,540
Story	\$ 358,400
Woodbury	\$ 300,000

Federal Engineering made a presentation and the Iowa Chapter of NENA Conference.

Federal Engineering had a kick-off meeting in conjunction with the ISICSB monthly meeting.

Nov. 2008 Federal Engineering worked on the 700 MHz Regional Plan for Region 15. They also worked on retrieving applicable data from the CTA report and began working on a new survey to supplement the missing information.

Dec. 2008 Board members reviewed a comprehensive public outreach plan developed by Federal Engineering.

Every PSAP in the State was contacted and asked to complete two surveys – one to determine points-of-contact for each PSAP and one to gather information on functional and operational issues.

Jan. 2009 The Office of Emergency Communications held a workshop for Board members that covered an update on Iowa's Statewide Interoperability Plan (SCIP), Iowa's National Emergency Communications Plan and future governance.

Sent out a PSAP/9-1-1 operational and functional survey.

Federal Engineering began to evaluate ICN termination points throughout the State.

Board members attended Homeland Security Region meetings in Regions 3, 4 and 6 to update meeting attendees on the activities of the Board.

Received formal approval for all of the PSIC Grant projects from the Office of Emergency Communications (OEC) and the National Telecommunications and Information Administration (NTIA).

Completed analysis of the draft 700 MHz regional plan for Region 15 and developed a report that categorized recommendations into three categories: Critical Enhancements, Important Enhancements and Suggested Enhancements

Feb. 2009 A web-based User Needs Survey was sent out to 600 points of contact previously identified by PSAP managers/supervisors.

The Board gave the Chairperson the authority to work with Federal Engineering to hire a Statewide Interoperability Coordinator (SWIC). Funding for the SWIC will come from the Interoperable Emergency Communications Grant.

March 2009 Federal Engineering released the third and final survey – the existing systems survey.

Representatives of Federal Engineering, the Chair and Vice Chair of the ISICSB attended the March 18th System Managers Group meeting in Minnesota to see how they are coordinating their efforts to expand and update the Minnesota system.

Began with Region 1 on the coverage analysis study (with a goal of 95% coverage).

Continued to investigate wireless data technologies and mobile broadband service providers in Iowa.

Informational presentations were made by Federal Engineering and Chairperson Todd Misel at both the Iowa Chapter of NENA and the Iowa Chapter of APCO Conferences in Urbandale.

Federal Engineering developed a public education brochure titled “Iowa Statewide Interoperable Communications System”.

The Board’s website went live – <http://isicsb.iowa.gov>.

April 2009 Board members attended a workshop put on by the Interoperable Communications Technical Assistance Program (ICTAP) to work on developing by-laws.

Federal Engineering completed the third and final survey used to gather information on existing system configurations.

Visited Illinois and met with the STARCOM 21 system administrators about the deployment of their statewide system and the lessons they learned throughout the process.

Meet with a number of State agencies to discuss their agency specific needs.

Meet with representatives of Verizon and Sprint to gain an understanding of their data service offerings, coverage and data throughput.

June 2009 Federal Engineering continued to interview representatives from state and local agencies to discuss agency-specific needs, operational structure and project-related matters.

Federal Engineering also continued their work on the following project activities:

- Detailed portable coverage analysis
- Analyzing 9-1-1 call volume
- Investigating interoperability in adjacent states
- Working on the Master Plan and functional system design

July 2009 Addition of four new Board members from the Iowa legislature, they include.

Iowa General Assembly Majority Leader of the Senate

Senator Tom Hancock

1007 E. Grand Avenue

Des Moines, Iowa 50319

(515) 281-3371

thomas.hancock@legis.state.ia.us

Iowa General Assembly Minority Leader of the Senate

Senator Shawn Hamerlinck

1007 E. Grand Avenue

Des Moines, Iowa 50319

(515) 281-3371

shawn.hamerlinck@legis.state.ia.us

Iowa General Assembly Speaker of the House of Representatives

Representative Kerry Burt

1007 E. Grand Avenue

Des Moines, Iowa 50319

(515) 281-3221

kerry.burt@legis.state.ia.us

Iowa General Assembly Minority Leader of the House of
Representatives

Representative Dave Tjepkes

1007 E. Grand Avenue

Des Moines, Iowa 50319

(515) 281-3221

david.tjepkes@legis.state.ia.us

Board approves the recommendation from the Region #15 Committee (RPC) to implement repacking of the 700 MHz Iowa license spectrum from 25KHz to 12.5KHz.

The RFP for a Statewide Interoperable Communications Coordinator (SWIC) was sent out July 9th.

August 2009

Federal Engineering provided the Chair with a copy of the draft Master Plan.

Extensive discussion on the issue of 700 MHz waiver filed with the FCC.

September 2009

Tom Berger from the Epworth Fire dept was appointed to replace Board Member Karlos Kirby who resigned due to military deployment

700 MHz re-pack statement of work is received at a cost of \$41,100.00. Approved by the Board for the work to proceed.

November 2009

The Board adopted the Master Plan presented by Federal Engineering.

Todd Misel and Dina McKenna were re-elected as Chair and Vice-Chair

December 2009

Federal Engineering solicits and evaluates candidates for the Statewide Interoperable Communications Coordinator (SWIC).

A draft of the technical section of the ISICS RFP was created based on the Master Plan. Key elements of the RFP include:

- Shall be an open standards based solution
- Shall support an open architecture structure
- Shall be IP centric
- Shall use the 700 MHz band
- Shall provide spectral efficiency
- Shall support unified statewide coverage

- Shall provide the ability to interoperate with any existing non- legacy communication system
- All proposed equipment must be certified by the current standards (e.g. P25) certification process

Les Fish presented an overview of the 700 MHz repack plan.

Vice-Chair McKenna attended the Bi-Annual SWIC Conference in Boston.

January 2010

Interviews were conducted and a recommendation to the Board was made to hire James Bogner as the SWIC.

The Board voted to approve the final draft of the ISICS RFP. That document will be kept confidential until the RFP is released. The date for release is not yet know.

John Benson, Chair Misel and Vice-Chair McKenna begin working on the IECGP grant application.

February 2010

The IECGP grant application is completed and submitted with half of the funds designated for narrow band planning and half to fund the SWIC position beyond the current two years.

March 2010

The SWIC provided the Board with information on the National Emergency Communications Plan (NECP).

Conference call with Office of Emergency Communications (OEC) staff to prepare for the May 25th and 26th workshop on governance structures.

April 2010

Major Scott Locker from the Polk County Sheriff's Office did a presentation to the Board regarding what they have done with the PSIC Grant funds they received.

Krista Tanner from the Iowa Utilities Board spoke to the Board about a project they are working on with Connect Iowa to create a detailed, interactive map of broadband coverage across the State.

The Board authorized Chair Misel to send a letter from the Board to the FCC asking that the 700 MHz D-Block be reserved for public safety.

Chair Misel gave a short presentation on the Department of Public Safety's plan for narrow banding.

Attended Minnesota's first Interoperability Conference.

May 2010

SWIC Bogner and Chair Misel attended the Region 5 Conference.

Four of the 11 projects that received PSIC Grant funds have been completed.

SWIC Bogner received information that the Broadband Technology Opportunity Program (BTOP) Grant has been reopened for the 21 entities (including Iowa) that have been granted permission to use the 700 MHz band for a wireless broadband network. The Board authorized the Chair and SWIC move forward with the grant application process. Because the grant application is so large and technical and must be submitted by July 1, 2010, the Board also authorized the SWIC and Chair to use grant funding to hire technical assistance.

Board members attended a two-day Technical Assistance Workshop led by the Department of Homeland Security's Office of Emergency Communications where they worked on developing a governance structure, SOP and forming committees.

June 2010

BTOP Grant application was completed and submitted.

SWIC Bogner provided the Board with information on the Public Safety Broadband Act.

July 2010

Gary Brown from Woodbury County made a presentation to the Board to report on how they have spent the PSIC funds they received.

SWIC Bogner attended the National Statewide Interoperability Coordinators (SWIC) Conference.

A "Frequently Asked Questions" document has been prepared and added to the website.

A draft "Charter" has been prepared and presented to the Board for review.

A committee was formed to develop "plain language" guidelines/recommendations.

August 2010

Insufficient member attendance for a quorum; only discussion followed

Iowa will participate in a Tri-state (Iowa, Minnesota, Wisconsin) Communications TTX on December 1, 2010 in La Crosse, WI, followed by a full exercise in the Spring, 2011, as part of NECP Goal 2 assessment.

Chair Misel, Vice-chair McKenna, SWIC Bogner, Les Fish and Ross Loder conducted a site visit at Dubuque, IA on June 1st for a briefing and tour of their communications system/capabilities.

Bogner provided an overview of the 700 MHz band and broadband initiatives.

September 2010

The ISICSB 'Plain Language' Committee reported that they generally supported the OEC Plain Language initiative, but had no specific recommendations for its adoption at this time. They would further study the issue.

ISICSB's attorney, Jeff Peterzalek, Attorney General's Office, provided the Board with an overview of the Administrative Rulemaking process to be used to establish a structure and rules for the ISICSB to be used instead of a charter and by-laws, as required by Iowa law. A working group will be formed to start on that process, which is expected to take about 6 months.

Chair Misel was informed by voicemail that Iowa will not be receiving any funds from the BTOP grant submission. Bogner advised that only two applicants, who applied at the time Iowa applied, were granted any BTOP funds. Chair Misel advised he would reassemble the RFP team together to discuss issuing an RFP in the coming months for the ISICS master plan system proposal.

The ISICSB will co-sponsor a COML class on November 8-10, 2010 along with the Security Institute in Sioux City, IA.

October 2010

Administrative Rulemaking process initiated with DPS and DOT representatives. Will be using much of the work already completed on the by-laws and incorporate that into Administrative Rules for the ISICSB. Proposed governance structure to be presented at the December meeting.

Plain Language Committee is working on this issue. Believe it has merit and will report at next meeting regarding ISICSB support by the Board along with Standard Channel Naming Nomenclature, adopted by APCO. Adopting these recommendations during narrowbanding process might save agencies money as both could be performed at the same time.

Brian Hitchcock, Director of the Scott Emergency Communication Center, Scott County, reported on the status of their PSIC Grant.

Based on the Region 7 RECCWG meeting in September, Region 7 is proposing to modify its membership to the four SWICs along with the state interoperability boards, since these groups are already involved in

statewide interoperability issues, which could be expanded to a regional vision through the RECCWG.

SWIC Bogner filed the quarterly report with the FCC regarding Iowa's wireless broadband waiver to report the progress Iowa is making on building out a broadband network.

November 2010 The ISICSB and Iowa Technical Community College co-sponsored a COM-L (Communications – Leaders) class in Sioux City November 8th - 10th with 22 students attending. This is Iowa's second such class and another one will be requested for eastern Iowa in early 2011.

December 2010 On December 1st, the Tri-State Planning Group (SWIC and ISICSB Members Berger and Boeckmann) held an interoperability briefing and table-top exercise focusing on interoperability for the three states of Minnesota, Wisconsin, and Iowa, covering a sixteen county area in northeast Iowa. A full-scale interoperability exercise will be held in 2011.

BTOP Grant Application – Final Report - The ISICSB was notified that Iowa was not awarded any BTOP grant funds to build out a wireless broadband network as Iowa did not have a reasonable and solid finance plan. We did not have matching funds identified or a solid plan of financing the non-federal funds portion of the network. It was noted that the ISICSB was unable to discuss funding with the Legislature as the grant application period was in July, 2010, when the Legislature was not in session.

The Chair and SWIC attended a Public Safety Communications Research (PSCR) nationwide conference in Boulder, CO on 12/1-3/10 on the national effort to build out a wireless public safety network. This was the largest such event held by PSCR to include the twenty FCC waiver recipients, manufacturers, FCC, etc. The ISICSB has joined other FCC waiver recipients to form an Operators Advisory Committee to the PSST (Public Safety Spectrum Trust) to share best practices and coordinate the nationwide wireless network build-out.

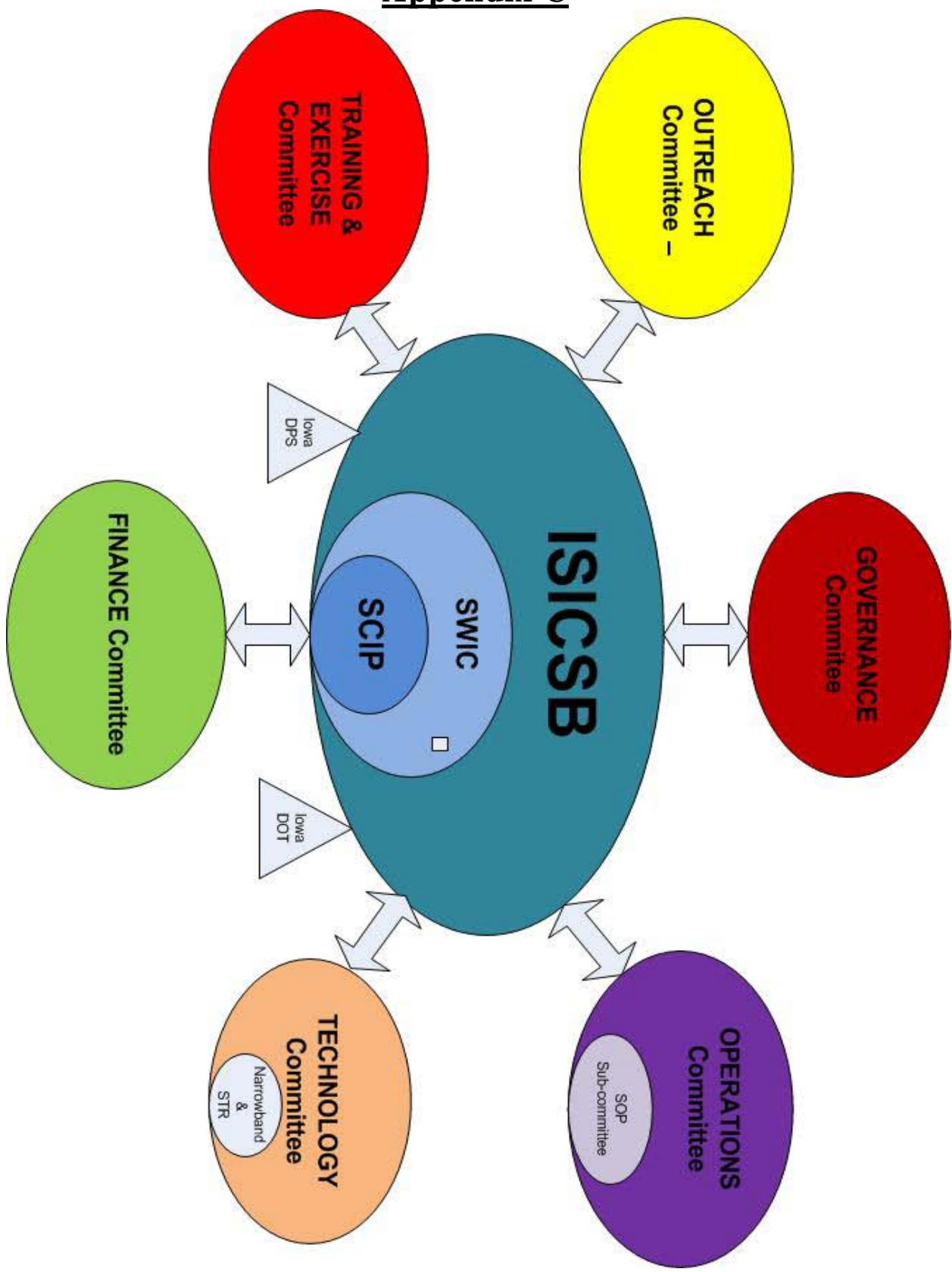
SWIC Bogner presented a proposed Governance model with Committees to the ISICSB, which voted to adopt the structure.

In November, ISICSB Member Roxanne Warnell resigned her Board position, representing Police.

The ISICSB voted to acquire the CASM (Communications Asset Survey and Management) tool to track interoperability and narrowbanding throughout Iowa. Forty-six other states are using this DHS tool.

Chair Misel advised that he would re-form a Committee to issue an RFI to pursue design options to build-out the 700 MHz statewide LMR plan as well as the wireless broadband network, the results of which would be discussed with the Governor and Legislature.

Appendix C



Appendix D

Iowa Statewide Interoperable Communications System Master Plan

September 29, 2009

(Executive Summary)

Prepared by:

Federal Engineering, Inc.
10600 Arrowhead Dr, Suite 160
Fairfax, VA 22030
703-359-8200

Executive Summary

Many state agencies and local governments across the State of Iowa own and operate disparate radio systems that are aging rapidly and in need of modernization. The lack of ability to intercommunicate with other agencies (multi-jurisdictional or cross-discipline), especially in emergency situations, is a matter of great concern to public safety officials. In order to address the issue of interoperability, Governor Chet Culver signed legislation in April 2007 establishing the Iowa Statewide Interoperable Communications System Board (ISICSB). The ISICSB was given the responsibility to develop, implement and oversee the policy, operations, and fiscal components of communications interoperability efforts at the state and local level and is ultimately responsible for developing and overseeing the operation of a statewide integrated public safety communications system.

Through a highly competitive selection process, the ISICSB selected Federal Engineering, Inc. (**FE**) to further analyze the communication needs across the State, and develop an overall strategy to address an interoperable communications system design and implementation plan for public safety agencies in Iowa. The system, referred to as the Iowa Statewide Interoperable Communications System (ISICS), will provide voice, data, video, and enhanced 911 communications capability for local public safety entities across the State, as well as state agencies such as the Department of Public Safety, Department of Transportation, and Department of Public Defense - Homeland Security and Emergency Management Division. Pivotal to this system offering is the underlying capability to provide ease of interoperation between and among the various state and local agencies in Iowa.

This ISICS Master Plan was developed through a collaborative process involving stakeholders from both state and local agencies, and includes the following:

- Analysis and results of user surveys
 - Results of coverage modeling
 - Radio and transport conceptual designs
 - Plans for state and local agency migration to the statewide system including alternatives for joining the system or interfacing to it
 - Proposed phased implementation approach
 - System costing estimates and funding strategy options
- Iowa Statewide Interoperable Communications System Master Plan

There are a number of key phases in the development of the overall statewide system design that are captured in the ISICS Master Plan. These are:

1. Identification of the current Iowa public safety communication environment
2. Evaluation of Iowa public safety communication needs and issues to be addressed in the ISICS offering
3. Creation of a conceptual design for the ISICS offering
4. Definition of interoperability processes for working with the ISICS network
5. Estimation of system cost and identification of funding strategy options for a phased system implementation

At the monthly ISICSB meetings, **FE** provided technical presentations and briefed the Board members on project progress. During these briefings, the Board affirmed **FE's** general findings with regards to user need analysis, and overall conceptual system design.

The current communications environment throughout the State of Iowa is described in this document and partitioned into segments that each focus on the state and local levels. As a starting point to understanding the Iowa communication environment, **FE** used the previous *Iowa Statewide Interoperable Radio System Feasibility Study* conducted by CTA Communications in 2007. Additionally, baseline system assumptions from the ISICSB including such as the use of 700 MHz narrowband spectrum, APCO P25 trunked system, dedicated microwave backbone, reuse of existing tower sites, and shared system approach were used to guide the ISICS conceptual system design. Essential to the overall design process was a concerted effort to accomplish widespread stakeholder participation of Iowa's public safety agencies at all levels – state and local, rural, and urban alike. **FE** conducted an extensive survey process to identify the user's needs as well as document the various current systems and their characteristics. These efforts included:

- Addressing the broadest user audience possible across the public safety agencies of Iowa (local and state agencies, small and large, urban and rural) through electronic survey questionnaires. Approximately 300 agencies responded from multiple disciplines (e.g., fire, law enforcement, emergency management, medical services, and communications).
- Conducting in-person meetings, discussions, and telephone interviews, with

individuals and groups to augment the questionnaire responses. Issues needing further clarification were handled via the personal interview process.

The **FE** team drew upon its depth of experience with advanced communication system design to analyze the information gathered through the survey process, to identify issues for the current communication offerings and discern elements of common needs across the stakeholders.

Factored into development of the system conceptual design were trends in technology (e.g., Internet Protocol (IP) based technologies, peer to peer architecture approach, “end of production” types of equipment) and the FCC mandate that all communications systems operating in the VHF and UHF frequency bands migrate to narrowband emissions prior to January 1, 2013. These considerations will greatly extend the life of the ISICS solution and allow for upgrades to future technologies currently being proposed. The outcome of this extensive analysis defined the common needs and points of focus for the communication system design. These were categorized into the following main categories:

- Shared state and local agency need (e.g., improved county level coverage, seamless roaming)
- State agency need (e.g., seamless roaming throughout the State of Iowa)
- Local agency need (e.g., portable radio coverage)

The shared state and local agency needs and the state agency needs are primary drivers for the conceptual communication system design. The local agency needs are addressed as considerations in the system design, such that flexibility of the design supports inclusion of these elements, but they are not considered mandatory at this time.

Some primary drivers from this analysis for the ISICS system design are:

- Standards-based solutions
- Common frequency band
- Mobile coverage across the State
- Seamless roaming support
- Flexible architecture
- Wireless video service support
- Advanced data service support

The ISICS is a network-of-networks designed to provide unified voice and data services for local and state agency users on a statewide basis. The ISICS consists of the ISICS radio network, the ISICS wireless data network, and the ISICS dispatch network; all interconnected via an IP-based ISICS transport network.

The ISICS conceptual design incorporates the following key system tenets:

- *Encourages use of current and proposed standards-based solutions* – a narrowband voice and data system based on APCO Project 25 (P25) trunked standards (current and proposed)
- *Defines a common communication platform* – employs flexible system topology and configurations to meet the demands of geographic constraints, and operational needs
- *Incorporate peer-to-peer architecture* – distributed call control for wireless communications spanning multiple communication areas
- *Employ IP networking technologies* – a common IP-based transport backbone network interconnecting the network elements of the ISICS offering

The ISICS radio network forms a wireless communication framework to support the voice communication needs for local and state agency users throughout the state, employing APCO P25 trunked system technology in the 700 MHz public safety spectrum. The radio network is segmented into three regions across the State of Iowa. Each region has a regional controller that manages communication needs within that region. Each regional controller interacts with the other regional controllers on a peer-to-peer level to provide support for communications that span regions. The radio network is designed to be fault tolerant and avoids any single point of failure that could totally disrupt communications.

The coverage goal for ISICS is to support a minimum of mobile-based coverage across 95% of each county in Iowa, providing a DAQ of 3.4 (public safety grade performance). As a point of comparison, the current VHF statewide LEA communication achieves the mobile-based 95% coverage goal in only 19 of the 99 Iowa counties. The **FE** coverage analysis indicates a network of 265 700 MHz sites can meet this coverage performance goal. The conceptual design allows flexibility to address future coverage need enhancement.

The ISICS wireless data network supports the wireless data communication needs for state and local agency users across the State. This is provided as a tiered approach sharing the 700 MHz public safety spectrum with a ubiquitous low bandwidth narrowband data solution, and a high bandwidth broadband overlay data solution. This combines the TIA standards-based P25 narrowband integrated voice and data solution with the 3GPP standards-based Long Term Evolution (LTE) broadband data offerings in the 700 MHz public safety spectrum. The P25 narrowband integrated voice and data solution is available throughout the ISICS coverage area. The LTE solution is to be implemented initially in select areas that have an immediate need for high speed data functionality, such as high density population centers, or public safety control centers, and later expanded to other areas of the ISICS network coverage. ISICS users may also utilize other available high-speed data services (e.g., cellular, WiFi) in the area to

address data service throughput needs in excess of the P25 narrowband data solution.

The ISICS dispatch network supports the interface between the E911 centers and the ISICS network to facilitate dispatch operations for state and local public safety agencies. Information captured from the E911 caller provided through the E911 PSTN-based network, and the Next Generation 911 (NG911) IP-based networks may be shared with the dispatch positions that support direct IP-based interfaces to the ISICS, or with radio control centers that interface via the ISICS radio network. The dispatch positions utilize the ISICS radio network and ISICS wireless data network to perform the necessary dispatch communications between the field responder units.

The ISICS transport network provides the cohesive interconnect between each of these networks (radio, wireless data, and dispatch) as well as the intra-network connectivity for all the elements of each of those networks. The ISICS transport network is a fault-tolerant, self-healing IP-based architecture composed of dedicated microwave network that is supplemented by wireline segments to interconnect each of the elements of the ISICS network. In this fashion, information and control can span the entire statewide network. This allows the potential for physical separation of controlling and controlled elements to afford better system resiliency.

The overarching driver for the ISICS development goes beyond simply supporting operable communications, addressing the need for effective interoperability among the multitude of first responders in the State of Iowa. Traditionally, jurisdictions and agencies have built stand-alone systems that meet their individual agency needs. However, these independent non-integrated systems throughout the State hamper inter-jurisdictional, and interdisciplinary (police, fire, EMS, transportation, etc.) communications. The ISICS design fosters ease of interoperability between state and local agencies through the statewide coverage network employing a unified radio system architecture. Implementing ISICS will allow state and local entities to communicate and share information in real time, provide for the consolidation of resources, and maintain a level of independence and autonomy during day-to-day operations.

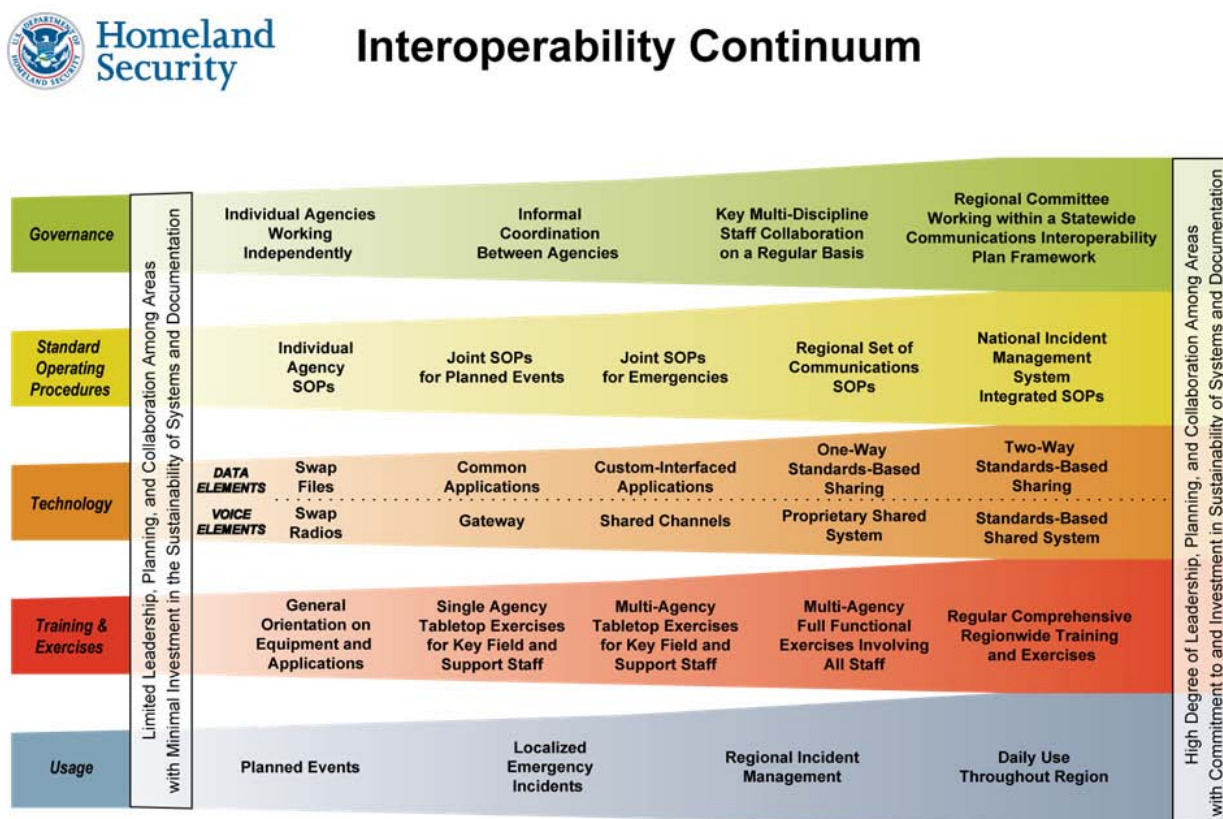
While directly integrating with the ISICS common platform represents the highest level of interoperability as defined on the SAFECOM Interoperability Continuum (shown in Figure 1 – SAFECOM interoperability continuum), local entities will have the ability to join the ISICS network on a voluntary basis. Each entity will have the flexibility to consider their current infrastructure investment and make one of the following choices:

- Adopt the ISICS common platform (representing a Level 5 on the SAFECOM Interoperability Continuum)
- Directly interface their current P25-compatible system assets into ISICS (approaching a statewide Level 5 on the SAFECOM Interoperability Continuum)
- Keep non-compatible infrastructure equipment and use available technologies to

access ISICS with a lower level of interoperability possible and associated limitations with the given approach (Level 2 on the SAFECOM Interoperability Continuum)

- Operate at the lowest level of interoperability using a radio cache when needed (Level 1 on the SAFECOM Interoperability Continuum)

Figure 1 – SAFECOM interoperability continuum



Strategies have been developed to help establish what level of interoperability can be achieved within a given approach.

Although the migration to ISICS encompasses many complex tasks, it can be achieved through an orderly process and partnership of the ISICSB, state and local agencies, project consultants, and the system contractor selected via competitive procurement. This Master Plan recommends that the 265-site ISICS be deployed in six phases that take into account limited financial resources, functional building blocks, the initial proof of concept, and logical expansion of the system. In addition, costs estimates associated with each phase have been included to aide for planning and budgetary purposes. The estimates provided are based on current and historical data derived from similar procurements in comparable jurisdictions.

The following elements are included in the total cost estimate of (\$336M):

- Site equipment
- Digital microwave network
- Physical infrastructure
- Project management, engineering, and implementation
- Contingency and spares

Since the subscriber costs will be driven by individual jurisdictions' implementation plans, the ISICSB chose to focus this analysis on the infrastructure cost elements. Subscriber costs are not included in the estimates, but need to be accounted for in each jurisdiction's ISICS budget.

The ability to obtain necessary funding or financing represents one of the greatest challenges and risks to a statewide project of this scope. The procurement and implementation of ISICS can be funded through several approaches such as capital appropriations, bond issues and vendor lease-purchase agreements and may be supplemented with federal grants or the redirection of existing state revenue resources. Often, combinations of these sources are used over several budgetary cycles. While the approach that Iowa employs to fund the ISICS will be unique to its deployment, **FE** has provided examples of how similar procurement and implementation strategies addressed funding for significant statewide technology programs around the country. In order for ISICS to succeed, more than technology needs to be addressed. As outlined in the SAFECOM Interoperability Continuum, interoperability must be addressed at the statewide level with regards to technology, governance, standard operating procedures (SOP), training, and system usage. As the creation of ISICS moves forward, emphasis on the establishment of regional committees representing stakeholder interests statewide should be prioritized.